UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/701,809	02/22/2001	Anthony Tung Shuen Ho	A33766PCTUSA	8946

21003 7590 08/11/2004

BAKER & BOTTS
30 ROCKEFELLER PLAZA
NEW YORK, NY 10112

EXAMINER	
PATEL, SHEFALI D	

ART UNIT	PAPER NUMBER
2621	12

DATE MAILED: 08/11/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/701,809	HO ET AL.	
	Examiner	Art Unit	
	Shefali D Patel	2621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *24 May 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *101-128* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *65-100* is/are allowed.

6)☒ Claim(s) *101-103,117-121,123 and 126-128* is/are rejected.

7)☒ Claim(s) *104-116, 122, 124-125* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. The amendment was received on May 27, 2004.

2. 35 U.S.C. 112 2nd paragraph rejections to claims 126-127 have been withdrawn but new 112 2nd paragraph rejection to claim 128 is made.

Response to Arguments

1. Applicant's arguments filed on April 22, 2004 (paper no. 9) on pages 14-16 have been fully considered but they are not persuasive.

Applicants' argue on page 14, regarding 35 USC 102(e) rejection of claim 101, that "*Thus, for at least the reasons stated by the examiner for allowance of claims 65-100, the elements recited in independent claim 101 are not taught or fairly suggested by the prior art.*" The Examiner disagrees. Claims 65-100 are allowed for the reasons indicated in previous office action mailed on January 20, 2004. If claim 101 (A method for extracting digital watermarking image data...) were to recite the same elements as claim 65 (A method for applying digital watermarking image data...), then claim 101 would be allowable for the same reason as claim 65. However, claim 101 differs from claim 65; invention of claim 65 is broader than that of claim 101.

Furthermore, Applicants' argue on page 14 that "*the present invention discloses extracting watermark information that my include, inter alia, trademark or logo images or speech of the original owner. In contrast, Cooklev discloses embedding and extracting a watermark that is limited to bits or a sequence of random numbers or a text string.*" The Examiner disagrees. First, Applicants' arguments regarding the "trademark or logo images or

speech of the original owner" are unconvincing. These components are not recited in the claim (at least in claim 101). Second, Cooklev discloses, at col. 11 lines 62-67: "watermark 54 may be implemented as a sequence of random numbers...such as an ASCII text string, or a combination such as an **ASCII name of a business entity**." According to www.dictionary.com a trademark is "A distinctive characteristic by which a person or thing comes to be known." An ASCII name of a business entity recited in Cooklev's invention is considered to be a possible trademark.

As far as 35 USC 103(a) rejection is considered, Applicant argues on page 15 that "*For at least the reasons stated above, Cooklev fails to teach or suggest all the recitations of independent claim 101.*" The arguments above regarding claim 101 still applies here.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 128 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

NOTE: Claim 128 is rejected because of the improper hybrid claim language. An application containing a hybrid claim wherein, for instance, a product is defined merely in terms of the process for producing it (a digital recording stored on any digital recording medium...using the method as claimed in claim 65). See MPEP § 705.01(e), situation (A). Where claims are directed to the same character of invention but differ in scope only, prosecution by Patentability Report is never proper. *A single claim which claims both an*

apparatus and the method steps of using the apparatus is indefinite under 112/2nd. In Ex parte Lvell, 17 USPQ2d 1548 (Bd. PA&I. 1990), a claim directed to an automatic transmission workstand and the method steps of using it was held to be ambiguous and properly rejected under 112/2d.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 101-103, 117-119, and 126-128 are rejected under 35 U.S.C. 102(e) as being anticipated by Cooklev (USPN 6,359,998).

With regards to **claim 128** Cooklev discloses a digital recording stored on any digital recording medium (See, col. 7 lines 13-47; See, Figure 1 and respective portion in the specification; Figure 3 element 76), the recording comprising a set of digital image, audio, or video data labeled with a watermark (digital image is the data 50 and 74 and the watermark being the element 54 and 90 as seen in figure 3) comprising a set of digital watermark image data or a set of digital watermark audio data, the set of labeled digital data being created by encoding a set of unlabeled digital data with the set of digital watermark data (set of labeled digital data 54 and 66 is being created by embedding watermark 54 to data 50, See, figure 3).

PLEASE NOTE: If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." In re Thorpe, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985) (citations omitted) (Claim was directed to a novolac color developer).

THE USE OF 35 U.S.C. 102 /103 REJECTIONS FOR PRODUCT-BY-PROCESS CLAIMS HAS BEEN APPROVED BY THE COURTS

"[T]he lack of physical description in a product-by-process claim makes determination of the patentability of the claim more difficult, since in spite of the fact that the claim may recite only process limitations, it is the patentability of the product claimed and not of the recited process steps which must be established. We are therefore of the opinion that when the prior art discloses a product which reasonably appears to be either identical with or only slightly different than a product claimed in a product-by-process claim, a rejection based alternatively on either section 102 or section 103 of the statute is eminently fair and acceptable. As a practical matter, the Patent Office is not equipped to manufacture products by the myriad of processes put before it and then obtain prior art products and make physical comparisons therewith." In re Brown, 459 F.2d 531, 535, 173 USPQ 685, 688 (CCPA 1972).

With regards to **claim 101** Cooklev discloses a method for extracting digital watermarking image data or digital watermarking audio data from a digital image, audio, or video data sample (watermark data is being retrieved by applying an inverse transformation at col. 12 lines 1-5, Figures 3-5), said method including the steps of: a) inputting a set of labeled digital data and unique key data containing information of locations of watermark data imposed

as a label on the labeled digital data (as seen in figure 3, the digital data is 50 and the key is 54, these both are combined and placed in storage 76. The key is disclosed at col. 11 lines 62-67 (i.e., "watermark 54 may be implemented as a sequence of random numbers or may be implemented as a pre-determined sequence as an ASCII text string, or a combination such as an ASCII name of a business entity followed by a sequential identifier such as a particular serial number or user identification number." The digital data at col. 10 lines 66 to col. 11 lines 1-2.); b) mapping the set of labeled digital data into a format suitable for orthogonal transformation (the digital data is formatted by partitioning of the blocks into format suitable for transformation at col. 11 lines 6-20, col. 12 lines 57 to col. 13 lines 1-7; and also seen in Figure 9 at element 102); c) performing an orthogonal transformation on the formatted labeled data to produce a set of labeled data transform coefficients (col. 11 lines 29-39); d) using the unique key to extract transform coefficients of orthogonally transformed watermark data from the location in the set of labeled data transform coefficients specified in the key (using the key 54 which is also stored in the storage as key 90, the transform coefficients are being extracted (i.e., retrieved) as seen in steps 86-96 in Figure 5 and also at col. 13 lines 14-42); e) using an inverse orthogonal transformation on the transformed watermark data to retrieve the embedded watermark data (inverse orthogonal transformation at step 64, col. 12 lines 5-15).

With regard to **claim 102** Cooklev discloses the step of mapping the set of labeled data into a two-dimensional matrix at col. 18 lines 36-46.

With regard to **claim 103** Cooklev discloses the step of dividing the two-dimensional matrix of labeled data into smaller sub-blocks (steps 78 and 80, Fig. 5 and respective portion in the specification) and the step of performing the orthogonal transformation on the labeled data

involves performing the orthogonal transform on each sub-block of the labeled data, such that the labeled data transform coefficients are organized in sub-blocks (steps 82 and 84, Figure 5 and respective portion in the specification).

With regard to **claim 117** Cooklev discloses step of displaying the watermark data samples for immediate examination or authentication at col. 7 lines 8-10 as seen in Figure 1 element 24.

With regard to **claim 118** Cooklev discloses step of storing the watermark data samples for future examination or authentication at col. 7 lines 9-10, 24-35 as seen in Figure 1 elements 20 and 22 and storage 76 in Fig. 3.

With regard to **claim 119** it is inherent from Cooklev's invention that the image/video data is obtained from a sample stream representing a digitized grayscale or color image.

With regard to **claim 126** Cooklev discloses an apparatus for applying digital watermark image data (See, col. 11 lines 45-67). Claim 126 recites identical features as claim 101. Thus, arguments similar to that presented above for claim 101 is equally applicable to claim 126.

Claim 127 recites identical features as claim 101 except claim 127 is an apparatus claim. Thus, arguments similar to that presented above for claim 101 is equally applicable to claim 127. Note, Figure 1 of Cooklev is an apparatus.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 119-121 and 123 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cooklev in view of Rhoads (USPN 6,427,020).

With regard to **claim 119** Cooklev discloses a digital image data as mentioned above. Cooklev does not expressly disclose where the digital data is obtained from a sample stream representing a digitized grayscale or color image. However, Rhoads discloses the digital data is being obtained from a sample stream representing a digitized grayscale or color image (See, col. 3 lines 67 to col. 4 lines 1-3). Cooklev and Rhoads are combinable because they are from the same field of endeavor, i.e., digital watermarking. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the teaching of Rhoads with Cooklev. The motivation for doing so is that Cooklev's invention is broad and does not necessarily discloses the type of the image data. Rhoads discloses that the image could be in any shape and form at col. 3 lines 47-53 and further discloses and suggests having a color image at col. 3 lines 59-67. Therefore, it would have been obvious to combine Rhoads with Cooklev to obtain the invention as specified in claim 119. Please also note that it would have been obvious matter of design choice to modify Cooklev's invention by having a color or grayscale image, since applicant has not disclosed that having either grayscale or color image solves any stated problem or is for any particular purpose.

With regard to **claim 120** Rhoads discloses obtaining the color or the grayscale image from a digital still camera or a digital image scanner at col. 6 lines 44-57.

With regard to **claim 121** Rhoads discloses the digital data being obtained from a sample stream representing digitized video at cols. 9 and 10 under Appendix A lines 25-27.

With regard to **claim 123** Rhoads discloses the digital data is being obtained from a sample stream representing one or more channels of digitized sound or music at cols. 9 and 10 under Appendix A lines 28-30.

Allowable Subject Matter

7. Claims 65-101 are allowed for the same reasons indicated in the previous action.

8. Claims 104-116, 122, and 124-125 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

2. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shefali D Patel whose telephone number is 703-306-4182. The examiner can normally be reached on M-F 8:00am - 5:00pm (First Friday Off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo H Boudreau can be reached on 703-305-4706. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Shefali D Patel
Examiner
Art Unit 2621

DANIEL MIRIAM
PRIMARY EXAMINER
July 27, 2004